

## Section 0-3: Simple Probability

By the end of this lesson, you should be able to answer:

- How do you find the probability of simple events?

Define the following:

1. Experiment
2. Trial
3. Outcome
4. Event
5. Probability
6. Theoretical Probability
7. Experimental Probability

Probability is the likelihood that a particular event will happen. This will be determined by finding the number of favorable outcomes (what you're looking to have happen) and divide by the total number of possible outcomes.

$$P(E) =$$

*Question: What is the difference between theoretical and experimental probability?*

*Example 1:* You roll one six-sided die. What is the probability of rolling a number greater than 4?

*Example 2:* A bag of lollipops has 4 orange, 6 grape, 2 watermelon, and 5 cherry lollipops. Find the following probabilities of getting a random lollipop.

- a.  $P(\text{grape})$
- b.  $P(\text{not watermelon})$

- c.  $P(\text{orange or cherry})$

*Example 3:* Find a coin and flip it 20 times. Keep track of how many heads and tails you flip in the table. Then answer the questions based on your results.

Outcome	Heads	Tails
Tally		
Frequency		

- What percentage of heads were you expecting before you performed your experiment? Why did you expect that?
- What percentage of heads did you actually have in your experiment? Did it vary from what you expected? Why do you think this might have happened?

Problem Set:

"Your time is limited, so don't waste it living someone else's life. Don't be trapped by dogma - which is living with the results of other people's thinking. Don't let the noise of other's opinions drown out your own inner voice. And most important, have the courage to follow your heart and intuition. They somehow already know what you truly want to become. Everything else is secondary." - Steve Jobs